

This Listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for controlling the configuration of elements of a telecommunications network  $[(N)]$  comprising a plurality of nodes, the method comprising the steps of:  $[-]$

generating a model configuration  $[(M1)]$  of said elements ~~, said model configuration~~ comprising, for at least one function of each element subjected to control, a respective model of implementation of the function itself,  $[-]$

collecting, for each element subjected to control, at least one respective set of configuration data  $[(..., CFk\_1, CFk, CFk+1,...)]$  of the element itself,  $[\text{and } -]$

verifying  $[(C)]$ , for each element subjected to control and in the absence of interaction with the element itself  $[\text{, the}]$  correspondence between said at least one function  $[\text{,}]$  as implemented on the basis of said at least one respective set of configuration data of the element  $[\text{,}]$  and said model of implementation of the function itself included in said model configuration, and ~~(M1), characterized in that said~~

performing the steps of generating a model configuration  $[(M1)]$ , collecting said at least one respective set of configuration data of the element and verifying said correspondence

~~are performed~~ in relation with at least one ~~[[among]]~~ of the group  
including: ~~[[ - ]]~~

an interfacing element between two nodes ~~[(k,~~  
~~k+1)]~~ of said plurality, and ~~[[ - ]]~~

a plurality of respective sets of configuration data  
~~[[ (CF, CM) ]]~~ of said element, said plurality of  
 respective sets of configuration data  
 expressing respective different configuration  
 states of the element.

2. (currently amended) The method as claimed in claim  
 1, ~~characterized in that it further comprises~~ comprising the steps  
 of: ~~[[ - ]]~~

simulating ~~[(S),]~~ on the basis of said at least one set  
 of configuration data of the element and in the absence of  
 interaction with the element subjected to control ~~[[,]]~~ the  
 implementation of said at least one function by generating at least  
 one respective outcome of implementation of the function itself  
 through the element subjected to control, and ~~[[ - ]]~~

verifying ~~{C}~~ the correspondence between said at least  
 one respective outcome of implementation obtained by simulation and  
 the corresponding implementation model included in said model  
 configuration ~~[[ (M1) ]]~~.

3. (currently amended) The method as claimed in claim  
 1, further comprising ~~or claim 2, characterized in that it~~  
~~comprises~~ the step of

selecting said plurality of respective sets of configuration data as exhaustive representation of the configuration states allowed for said element.

4. (currently amended) The method as claimed in claim 1, further comprising ~~any of the claims 1 to 3, characterized in that it comprises~~ the step of

modifying the configuration data included in said at least one respective set of configuration data.... CFk-1, CFk, CFk1,...)] of each element subjected to control in order to obtain the correspondence between the actual configuration of the element and said model configuration [[(M1)]].

5. (currently amended) The method as claimed in any of the previous claims, characterized in that it comprises claim 1, further comprising the step of

selecting said model configuration [[(M1)]] as representative of at least one [[among]] of the group including:

- a set of configuration data meant to be identical on all homologous elements of the network in the cases of configuration control;
- a set of expected behaviours for an element in the case of functional analysis; and
- a set of exhaustive behaviors of all elements able to be traversed in the case of simulation of a determined service throughout the network.

6. (currently amended) The method as claimed in ~~any of the claims 1 to 5, characterized in that it comprises~~ claim 1, further comprising the step of

providing a control management station  $[(W1)]$  for the generation of said model configuration  $[(M1)]$ .

7. (currently amended) The method as claimed in ~~any of the previous claims, characterized in that it comprises~~ claim 1, further comprising the step of

providing a plurality of control stations  $[(U1, \dots, Un)]$  able to start the execution of said verifying step  $[(C)]$ .

8. (currently amended) The method as claimed in ~~any of the claims 1 through 7, characterized in that~~ claim 1 wherein at least one ~~, and preferably all,~~ of said steps of generating, collecting, simulating, verifying and modifying  $[(are)]$  is configured to be performed in a centralized position with respect to said elements subjected to control.

9. (currently amended) The method as claimed in claim 2, ~~characterized in that~~ wherein said simulating step is performed on the basis of at least one respective set of analysis functions  $[(A)]$  representative of a respective element model.

10. (currently amended) The method as claimed in claim 2 ~~or claim 9, characterized in that~~ wherein said simulating step is conducted  $[(in)]$  step-by-step fashion.

11. (currently amended) A system for controlling the configuration of elements of a telecommunications network  $[(N)]$  comprising a plurality of nodes, the system comprising:  $[-]$

a database  $[(DB)]$  containing a model configuration  $[(M1)]$  of the elements of said network and ~~(N), said model configuration~~ comprising

for at least one function of each element subjected to control  $[[,]]$  a respective model of implementation of the function itself ~~;~~ ~~said database (DB) further comprising,~~

for each element subjected to control  $[[,]]$  at least one respective set of configuration data  $[(..., CFk\_1, CFk, CFk+1,...)]$  of the element itself  $[[, \text{ and}]]$

for each element subjected to control a verification module  $[(C)]$  to verify ~~, for each element subjected to control and~~ in the absence of interaction with the element itself  $[[, \text{ the}]]$  correspondence between said at least one function, as implemented on the basis of said at least one respective set of configuration data, and said model of implementation of the function itself included in said model configuration, and ~~(M1), characterized in that wherein said database  $[(DB)]$  contains~~

a model configuration as well as a set of configuration data to allow the ~~aforesaid~~ verification by said verification module ~~[[C]] in relation with at least one among:~~ an interfacing element between two nodes ~~[(k, k+1)]~~ of said plurality ~~, and~~ or a plurality of respective sets of configuration data ~~[(CF, CM)]~~ of said element, said plurality of respective sets of configuration data expressing respective different configuration states of the element.

12. (currently amended) The system as claimed in claim 11, further comprising ~~characterized in that it comprises :~~ ~~[[ - ]]~~ a simulation module ~~[(S)]~~ to simulate ~~[[,]]~~ based on said at least one respective set of configuration data of the element and in the absence of interaction with the element subjected to control, the implementation of said at least one function and generating at least a respective outcome of implementation of the function itself by the element subjected to control, ~~and in that~~ said verification module ~~[(C) is]]~~ being configured to verify the correspondence between said at least one respective outcome of implementation obtained by simulation and the corresponding implementation model included in said model configuration ~~[(M1)]~~.

13. (currently amended) The system as claimed in claim 11 ~~or claim 12, characterized in that~~ wherein said verification module  $[(C)]$  is configured to operate on a plurality of respective sets of data constituting an exhaustive representation of the allowed configuration states for said at least one element subjected to control.

14. (currently amended) The system as claimed in ~~any of the claims 11 through 13, characterized in that~~ claim 11 wherein the system itself is configured to modify the data included in said at least one respective set of configuration data  $[(..., CFk1, CFk, CFk1, ...)]$  of each element subjected to control in order to obtain the correspondence between the actual configuration of the element and said model configuration  $[(M1)]$ .

15. (currently amended) The system as claimed in ~~any of the claims 11 through 14, characterized in that~~ claim 11 wherein said database  $[(DB)]$  contains a model configuration  $[(M1)]$  representative of at least one  $[[among]]$  of the group including:

a set of configuration data that it is required be identical on all the homologous elements of the network in the cases of configuration controls;

a set of expected behaviors for an element in the case of functional analyses; and  $[-]$

a set of exhaustive behaviors of all elements that can be traversed in the case of simulation of a determined service throughout the network.

16. (currently amended) The system as claimed in claim 11, further comprising any of the claims 11 through 15,  
~~characterized in that it comprises~~

a control management station  $[(W1)]$  for generating said model configuration  $[(M1)]$ .

17. (currently amended) The system as claimed in ~~any of the previous claims 11 to 16,~~ characterized in that it comprises claim 11, further comprising

a plurality of control stations  $[(U1, \dots, Un)]$  able to drive said verification module  $[(C)]$ .

18. (currently amended) The system as claimed in ~~any of the claims 11 a 17,~~ characterized in that at least one, and preferably both, of claim 11 wherein said database ~~(DB)~~ and or said verification module  $[(C)]$  are is located in a centralized position relative to said elements  $[(\dots, k-1, k, k+1, \dots)]$  subjected to control.

19. (currently amended) The system as claimed in claim 12, ~~characterized in that~~ wherein said simulation module  $[(S)]$  comprises a respective set of function for the simulation of respective functions alities.



20. (currently amended) The system as claimed in claim 12 ~~or claim 19, characterized in that~~ wherein said simulation module ~~[(S)]~~ operates according to step-by-step simulation modes.

21. (currently amended) A computer program product able to be directly loaded into the internal memory of at least one digital computer and comprising portions of software code to implement the method as claimed in ~~any of the claims 1 through 10~~ claim 1.